

DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Tom L. Young, declare:

that I am a citizen of the United States of America residing at and having a post office address of 1438 West San Lucas Drive, Tucson, AZ 85704;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Michael G. Greene, Dennis R. Rice, Kelly L. Karlage, Sean P. Premeau and Janet M. Cassells are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

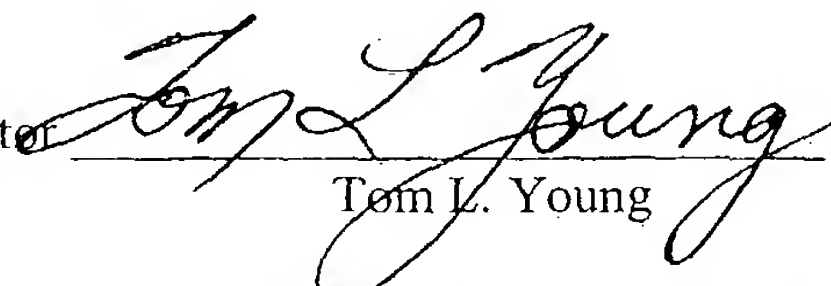
I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

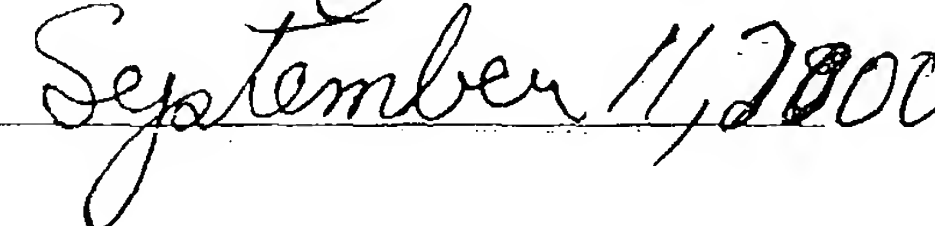
Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

  
Tom L. Young

Date

  
September 11, 2000

DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Michael G. Greene, declare:

that I am a citizen of the United States of America residing at and having a post office address of 1152 West Wheatridge Drive, Tucson, AZ 85704;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Tom L. Young, Dennis R. Rice, Kelly L. Karlage, Sean P. Premeau and Janet M. Cassells are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

Michael G. Greene  
Michael G. Greene

Date

9/13/00

DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Dennis R. Rice, declare:

that I am a citizen of the United States of America residing at 900 North Sycamore Drive, Oracle, AZ 85623-0187 and having a post office address of P. O. Box 187, Oracle AZ 85623-0187;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Tom L. Young, Michael G. Greene, Kelly L. Karlage, Sean P. Premeau and Janet M. Cassells are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

*Dennis R. Rice*  
Dennis R. Rice

Date

*Sept 11, 2000*

DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Kelly L. Karlage, declare:

that I am a citizen of the United States of America residing at and having a post office address of 1071 West Camino Desierto, Tucson, AZ 85704;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Tom L. Young, Michael G. Greene, Dennis R. Rice, Sean P. Premeau and Janet M. Cassells are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

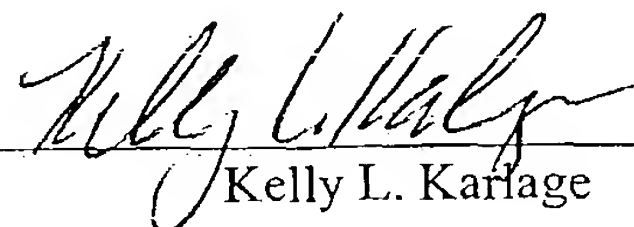
I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

  
Kelly L. Karlage

Date





DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Sean P. Premeau, declare:

that I am a citizen of the United States of America residing at and having a post office address of 712 North 11th Avenue, Tucson, AZ 85705;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Tom L. Young, Michael G. Greene, Dennis R. Rice, Kelly L. Karlage and Janet M. Cassells are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

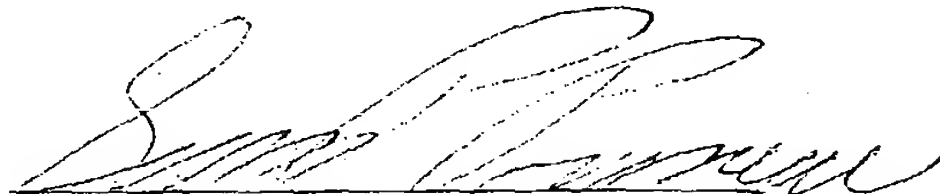
I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

  
Sean P. Premeau

Date

9/11/00

DECLARATION, POWER OF ATTORNEY, AND PETITION

To The Commissioner of Patents and Trademarks:

I, Janet M. Cassells, declare:

that I am a citizen of the United States of America residing at and having a post office address of 1322 N. Avenida Marlene, Tucson, AZ 85715;

that I have reviewed and understand the contents of application Serial No. 09/546,997, filed April 12, 2000, including the specification and claims and I verily believe I and Tom L. Young, Michael G. Greene, Dennis R. Rice, Kelly L. Karlage and Sean P. Premeau are the original, first, and joint inventors or discoverers of the invention or discovery in MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC ACID described and claimed therein and for which a patent is sought;

that this application claims the benefit of U.S. Provisional Application No. 60/128,796, filed on April 12, 1999;

I acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37 Code of Federal Regulations § 1.56;

and I hereby appoint Edward L. Bowman, Registration No. 27,116; Ryan N. Cross, Registration No. 33,861; Beverly M. Dollar, Registration No. 32,870; John M. Fish, Jr., Registration No. 25,863; Gary L. Haag, Registration No. 35,529; Bion E. Hitchcock, Registration No. 26,613; Lynda S. Jolly, Registration No. 32,736; Allen W. Richmond, Registration No. 28,662; and Charles W. Stewart, Registration No. 34,023; who comprise the firm of **Richmond, Hitchcock, Fish & Dollar, P. O. Box 2443, Bartlesville, Oklahoma, 74005**, Registration No. 20,286; and Archie W. Umphlett, Registration No. 25,935, each attorney a member of the Bar of the State of Oklahoma or the District of Columbia; my representatives with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Wherefore I pray that Letters Patent be granted to Phillips Petroleum Company, a corporation organized and existing under the laws of the State of Delaware and domiciled and having an office at Bartlesville, Oklahoma, as assignee, for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Correspondence Address:

c/o **RICHMOND, HITCHCOCK  
FISH & DOLLAR  
P.O. Box 2443  
Bartlesville, Oklahoma 74005**

Inventor

Janet M. Cassells  
Janet M. Cassells

Date

9-12-00

Docket No.: 59883-053

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Tom L. YOUNG, et al.

Serial No.: 09/546,997

Group Art Unit: 1626

Filed: April 12, 2000

Examiner: F. Higel

For: MATERIALS AND METHOD FOR THE BIOLOGICAL PRODUCTION OF SULFURIC  
ACID

**REVOCATION OF POWER OF ATTORNEY, APPOINTMENT  
AND CERTIFICATION UNDER 37 CFR 3.73(B)**

Commissioner for Patents  
Washington, DC 20231

Sir:

The undersigned assignee of the above-identified application hereby revokes all previous Powers of Attorney and appoints the following attorneys with full power to prosecute the application, to make alterations and amendments therein, and to transact all business in the United States Patent Office connected therewith.

I hereby appoint the following attorney(s) and/or agent(s):

Michael E. Lee, Reg. No. 38,949; Polly C. Owen, Reg. No. 44,991; Charles W. Stewart, Reg. No. 34,023; Hsiang-ning Sun, Reg. No. 39,849; Steve A. Owen, Reg. No. 50,355, all of Chevron Phillips Chemical Company, LP;

and

Steven W. Allis, Reg. No. 50,532; Stephen A. Becker, Reg. No. 26,527; John G. Bisbikis, Reg. No. 37,095; Daniel Bucca, Reg. No. 42,368; Kenneth L. Cage, Reg. No. 26,151; Jennifer Chen, Reg. No. 42,404; Bernard P. Codd, Reg. No. 46,429; Lawrence T. Cullen, Reg. No. 44,489; Paul Devinsky, Reg. No. 28,553; Margaret M. Duncan, Reg. No. 30,879; Shamita De. Etienne-Cummings, Reg. No. 46,072; Ramyar M. Farid, Reg. No. 46,692; Brian E. Ferguson, Reg. No. 36,801; Michael E. Fogarty, Reg. No. 36,139; John R. Fuisz, Reg. No. 37,327; Willem F. Gadiano, Reg. No. 37,136; Keith E. George, Reg. No. 34,111; John A.

Hankins, Reg. No. 32,029; Eric J. Kraus, Reg. No. 36,190; Catherine Krupka, Reg. No. 46,227; Jack Q. Lever, Reg. No. 28,149; Raphael V. Lupo, Reg. No. 28,363; Burman Y. Mathis III, Reg. No. 44,907; Michael A. Messina, Reg. No. 33,424; Dawn L. Palmer, Reg. No. 41,238; Joseph H. Paquin, Jr., Reg. No. 31,647; Scott D. Paul, Reg. No. 42,984; William D. Pegg, Reg. No. 42,988; Robert L. Price, Reg. No. 22,685; Gene Z. Robinson, Reg. No. 33,351; Joy Ann G. Serauskas, Reg. No. 27,952; David A. Spenard, Reg. No. 37,449; Arthur J. Steiner, Reg. No. 26,106; David L. Stewart, Reg. No. 37,578; Wesley Strickland, Reg. No. 44,363; Michael D. Switzer, Reg. No. 39,552; David M. Tennant, Reg. No. 48,362; Daniel S. Trainor, Reg. No. 43,959; Kelli N. Watson, Reg. No. 47,170; Cameron K. Weiffenbach, Reg. No. 44,488; Aaron Weisstuch, Reg. No. 41,557; Edward J. Wise, Reg. No. 34,523; Jeffrey A. Woller, Reg. No. 48,041; Alexander V. Yampolsky, Reg. No. 36,324; and Robert W. Zelnick, Reg. No. 36,976 all of

McDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and all future correspondence should be addressed to them.

**CERTIFICATE UNDER 37 CFR 3.73(b)**

Phillips Petroleum Company, a corporation of Delaware, certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of:

An Assignment from the inventor(s) of the patent application identified above. The assignment was:

Recorded in the Patent and Trademark Office at Reel 011182, Frame 0323.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.



09/546,997

The undersigned further declares that all statements made herein of its own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

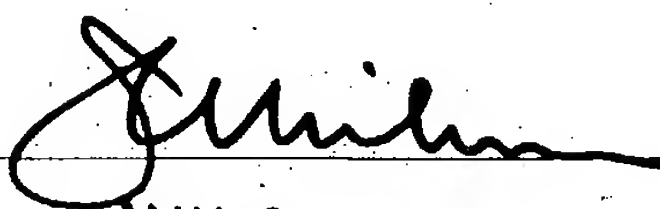
Respectfully submitted,

Phillips Petroleum Company

Name: John C. Mihm

Title: Sr. Vice President of Technology & Project Development

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

MAY 24 2002

